

## CLAIMS

What is claimed is:

1. A method for generating a multiple exposure in a digital camera, the method  
2 comprising:  
entering a multiple-exposure mode in the digital camera;  
4 capturing a plurality of digital images; and  
automatically combining the plurality of digital images to generate the  
6 multiple exposure.
2. The method of claim 1, further comprising:  
2 saving the multiple exposure.
3. The method of claim 1, wherein automatically combining the plurality of digital  
2 images to generate the multiple exposure comprises weighting and summing the  
plurality of digital images.
4. The method of claim 3, wherein each of the plurality of digital images is weighted  
2 by the reciprocal of the number of digital images being summed.
5. The method of claim 3, wherein the plurality of digital images are captured at  
2 successive time instants, and earlier digital images are weighted more heavily than  
later digital images.

6. The method of claim 3, wherein the plurality of digital images are captured at  
2 successive time instants, and later digital images are weighted more heavily than  
earlier digital images.
7. The method of claim 3, wherein the plurality of digital images are captured at  
2 successive time instants, and one predetermined digital image of the plurality of  
digital images is weighted more heavily than all other digital images.
8. The method of claim 1, wherein the plurality of digital images are captured at time  
2 instants distributed within a predetermined period.
9. The method of claim 1, wherein at least one portion of at least one of the plurality  
2 of digital images is darkened prior to automatically combining the plurality of  
digital images to generate the multiple exposure.
10. A method for generating a multiple exposure in a digital camera, the method  
2 comprising:  
displaying simultaneously a background digital image and a  
4 superimposed preview image;  
capturing a digital image of the preview image; and  
6 combining the background digital image and the digital image of the  
preview image to generate the multiple exposure.
11. The method of claim 10, further comprising:  
2 saving the multiple exposure.

12. The method of claim 10, wherein the background digital image comprises a  
2 composite of a plurality of digital images.

13. A digital camera, comprising:

2 an optical system;  
an imaging device for converting optical images received from the  
4 optical system to corresponding digital images;  
a memory for storing the digital images; and  
6 a controller configured for combining the digital images.

14. The digital camera of claim 13, further comprising:

2 a display configured for displaying simultaneously a first digital image  
and a superimposed preview image.

15. The digital camera of claim 13, further comprising:

2 an input device for specifying the number of digital images to be  
combined.

16. The digital camera of claim 13, further comprising:

2 an input device for specifying a weighting factor for each of the digital  
images to be combined.

17. A digital camera, comprising:

2 means for collecting optical images;

means for converting the optical images to corresponding digital  
4 images;  
means for storing the digital images; and  
6 means for combining the digital images.

18. The digital camera of claim 17, further comprising:

2 means for displaying simultaneously a first digital image and a  
superimposed preview image.

19. The digital camera of claim 17, further comprising:

2 means for specifying the number of digital images to be combined.

20. The digital camera of claim 17, further comprising:

2 means for specifying a weighting factor for each of the digital images  
to be combined.